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HAGAR AND ISHMAEL.

ABRAMHAM was one of the mightiest men that ever lived. His power did not consist in the great armies he controlled, or in the greatness of the nation over which he ruled; but it was in the power which he obtained with God through his faith. He is called "the father of the faithful" and "the friend of God," and God made as great promises to him as probably could be made to any mortal being. There is not much written about his early life that has come down to us, of Ur, of the Chaldees. Haran had two daughters—Sarai and Milcah. Abraham married Sarai—her name was afterwards changed by the Lord to Sarah—and his brother Nehor married Milcah. By the command of the Lord Abraham took his wife and all who would accompany him and moved out of Chaldea into Canaan. Abraham and Sarah lived together as man and wife for a great many years; but they had no children. The Lord, however, had revealed unto



and we shall not write anything respecting it at present; but allude to that portion of his life in which the incident occurred that is illustrated in the accompanying engraving.

Abraham had a wife, the Bible calls her his sister, the daughter of his father Terah; but in his own record, which the prophet Joseph translated, he informs us that she was the daughter of his brother Haran, and, consequently, the sister of Lot. Haran died during a famine which raged in the land

Abraham the law of celestial marriage. He knew that it was his privilege to have more wives than Sarah. Sarah, herself, understood this law, and when God commanded her husband she took her handmaid, whose name was Hagar, and gave her to Abraham to be his wife. She did this because it was the law, and if Abraham had not obeyed this law, the promises of God could not have been fulfilled to him wherein He told him that his seed should be as the dust of the earth or the

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INDIA.

stars of heaven, so numerous that they could not be counted.

Hagar had a son, and Abraham called his name Ishmael. Abraham was eighty-six years old when the boy was born to him. Before the boy was born Sarah became jealous of Hagar and oppressed her. Hagar ran away. An angel of the Lord found her by a fountain of water in the wilderness, and, after asking her where she was going, told her to go back to her mistress Sarah, and submit herself under her hands. He told her that her children should be multiplied exceedingly, they should be so numerous that they could not be counted. He also told her what her son's name should be, and that he should be a wild man; "his hand will be against every man, and every man's hand against him;" but he should dwell in the presence of all his brethren. Hagar returned, and remained there till after Isaac was born.

God had promised unto Abraham that Sarah should have a son, and that in him should his (Abraham's) seed be called. When Abraham was a hundred years old and Sarah ninety years old, this boy—Isaac—was born. This was a very wonderful event, and being also in fulfilment of the promise of God, there was great joy in the family. When the boy was weaned, his father made a great feast in honor of the event. Ishmael by this time had grown considerably; and it is very likely that the traits of character for which he was distinguished when he became a man had already begun to show themselves. He was a wild man and at the time of which we write he may have been a wild and mischievous boy, at any rate at this feast he was guilty of mocking, and Sarah saw him. There are no particulars given us about how badly he acted; but Sarah was offended. She wanted him and his mother sent away. She may have feared that, being older than her boy, his influence over and conduct towards him might not be very good. She called Hagar a bondwoman, which means a slave. In those days slavery was common, and it appears that Hagar had been Sarah's slave. She did not want "the son of this bondwoman" to be the heir with her son.

Abraham was grieved at this difficulty in his family. But the Lord comforted him, and said: "Let it not be grievous in thy sight because of the lad, and because of thy bondwoman." He told him to let Hagar and her son go.

It seems to have been the design of the Lord that Ishmael and Isaac should be separated and not grow up together. He told Abraham that in Isaac should his seed be called; but said He, "and also of the son of the bondwoman will I make a nation, because he is thy seed." In the next number we will show you how truly this was fulfilled, and how the Lord, in permitting what seemed to be an evil to come upon Hagar and Ishmael, was preparing the way for the boy to become the founder of a great nation.

After the Lord had counseled Abraham what to do he rose up early in the morning, and took bread, and a bottle of water, and gave them unto Hagar. This is the scene represented in the engraving. The artist has placed Sarah and Isaac in the back ground. In the front Abraham is engaged in fastening the bottle on to the shoulder of Hagar. She has Ishmael by the hand. He appears like a very little boy; but the artist has made a mistake in his size. Ishmael at the time his mother and himself started away was a good-sized boy; he must have been fifteen or sixteen years old at least.

(To be Continued.)

"Did any of you ever see an elephant's skin?" inquired a teacher of an infant class.

"I have!" shouted a six-year old from the foot of the class.

"Where?" asked the teacher.

"On the elephant," said the boy, laughing.

PERHAPS it may be interesting to the boys and girls of our mountain vales to be informed as to the manner in which the children in India get along in school. I will tell you. Quite a large number are taught by one man, and the elder boys who assist him. They learn to write on sand, which is placed on pieces of smooth rock, or board and the letters are traced with the finger of the pupil teacher, and the members of the class follow in turn, each repeating aloud the lesson until all have finished, when they start with a fresh lesson. They have reading and spelling lessons, which are prepared upon coarse sheets of paper, with printed characters, and some are written with a reed pen, and ink, upon plantain leaves, and strung upon a piece of strong thread. Sometimes a whole school will repeat a lesson after a leader, and accompany it with a regular movement of the body, backward and forward, to keep time. In some of the large cities they have very large schools, where they are taught as many as seven or eight languages, besides history, grammar, geography and arithmetic, as well as geometry and astronomy.

There are no schools for girls or women; they are instructed by their mothers at home, in weaving and other household duties, with the exception of a few, who are taught modern christianity by the different European and American missionaries, and those whose parents are Mohammedans.

These poor children are raised to worship idols, and are taught all the ridiculous and absurd creeds and worship of heathen idolatry; yet the kindness of their parents is very marked and pleasing to witness, except in times of famine, when thousands of their little ones are sold for sometimes a very small portion of food to the rich natives or the whites.

Children, be thankful that your parents are Saints, and that you know that Jesus Christ is your Savior.

UNCLE WILLIAM.

SPARE MOMENTS.

A LEAN, awkward boy came one morning to the door of the Principal of a celebrated school, and asked to see him. The servant eyed his mean clothes, and thinking he looked more like a beggar than anything else, told him to go round to the kitchen entrance. The boy did as he was bidden, and soon appeared at the back door. "I should like to see Mr. B.," he repeated.

"You want a breakfast, more like," said the servant-girl, "and I can give you that without troubling him."

"Thank you," said the boy, "I should have no objection to a bit of bread; but I should like to see Mr. B., if he can see me."

"Some old clothes, may be, you want," remarked the servant, again eyeing the boy's patched trowsers. "I know he has none to spare," and without regarding the boy's request, she went away about her work.

"Can I see Mr. B.?" again asked the boy, after finishing his bread and butter.

"Well, he's in the library; if he must be disturbed; but he does like to be alone sometimes," said the girl in a peevish tone. She seemed to think it very foolish to admit such an ill-looking fellow into her master's presence: however, she wiped her hands, and bade him follow. Opening the library door, she said:—"Here's somebody, sir, who is dreadful anxious to see you, and so I let him in."

I don't know how the boy introduced himself, nor how he opened his business, but I know that after talking awhile,

the Principal put aside the volume which he was studying, and took up some Greek books and began to examine the new-comer. The examination lasted some time. Every question which the Principal asked, the boy answered as readily as could be.

"Upon my word," exclaimed the Principal, looking at the boy from head to foot over his spectacles, "you certainly do well. Why, my boy, where did you pick up so much?"—"In my spare moments," answered the boy.

Here he was, a poor, hard-working boy, with but few opportunities for schooling, yet almost fitted for college by simply improving his *spare moments*. Truly, are not spare moments "the gold dust of time?" How precious they should be! What account can you give of your spare moments? What can you show for them? Look and see. This boy can tell you how very much can be laid up by improving them; and there are many, many other boys, I am afraid, in jail, in the house of correction, in the fore-castle of a whale ship, in the tippling shop, who, if you should ask them when they began their sinful courses, might answer, "In my spare moments."

Temptation always hunts you out in small seasons like these, when you are not busy; he gets into your hearts, if he possibly can, in just such ways. There he hides himself, planning all sorts of mischief. Take care of your spare moments.

ARCHITECTURE OF BIRDS.

THE following interesting extract is taken from *Every Saturday*, being a translation of a French review on "The Universe," a book written by M. Pouchet, director of the museum of natural history at Rouen:

"A really interesting part of M. Pouchet's book is that which treats of the architecture of birds. M. Pouchet has had drawn from nature a great number of nests of a very curious construction which are preserved in the museum of Rouen. The most remarkable of all is the sewing linnets (*Sylvia sutoria*, Latham,) copied from a representation in the museum of London. This nest is very rare; it is composed of two or three leaves very long and lanceolated, the edges of which the bird hems carefully together with the aid of a flexible blade of grass which serves as thread. The female afterwards fills with cotton the species of little bag formed in this manner, and lays its pretty progeny in this soft bed which the winds cradle. What one would hardly believe is, that birds do not confine themselves always to construct shelters for the protection of their family; there are some, it appears, which sacrifice to luxury, and build for themselves pleasure houses, and groves destined for amorous promenades. The speckled *chlamyder*, described by Gould, offers us the unexpected example. This is an exotic bird, which resembles our partridge; it is distinguished from it by its deep color relieved by clear spots, and by its neck which is adorned by a red collar. To construct their nuptial dwelling, the couple proceed methodically. For its location they choose an open place, exposed to the sun and to the light. Their first care is to make a path of round pebbles; when they deem it sufficiently thick they begin planting in it a little avenue of branches. They are seen for this purpose to bring from the country slender shoots of trees of about the same size, which are thrust solidly by the thick end into the interstices of the stones. These branches are disposed in two parallel rows, converging a little in such a manner that they form a miniature shrubbery. The plantation is a yard in length, and is sufficiently wide to allow the two birds to walk alongside each other in the interior. This grove being finished, they devote themselves to embellishing it.

They each go foraging in the fields, and bring back all the sparkling objects they can pick up—pearl shells, birds' feathers, all that charms the eye. These trophies are suspended at the entrance to the grove, which soon begins to shine in the sun like a palace of the Arabian Nights. In the places frequented by the *chlamyder*, if a traveler loses his watch, his knife, his seal, he does not spend his time looking for it on the ground; he knows where to find it. The discovery of these facts appeared so extraordinary to Mr. Gould, that he feared to meet in Europe only with unbelievers. To answer beforehand all objections, he had one of these wonderful shrubberies taken up, and succeeded in transporting it to the British museum, where it can be seen to-day. A little later, a living *chlamyder* was brought to the zoological gardens of London. He was at once placed in a large room in the midst of all the materials for his constructions; but the poor exile only made shabby work of it. He scarcely touched the branches, to plant a few here and there in a heap of stones. He wanted the air and the sun; he wanted especially a companion.

MYSTERIES OF THE MICROSCOPE.

NOT that there is any especial hidden mystery in the innocent-looking, modest little instrument that presents objects to us as they are, making huge monsters out of mere mites, and as often presenting most magnificent animals in what, to the unaided eye, appears an uncouth atom. The mystery is of the microscope. Its power, to our intelligence, as at present educated, is unintelligible, and would be magical, but that we know the microscope to be innocent of the black art, and the maker only a man like ourselves—a trifle more clever, perhaps, but not a mite of a magician. So much of thought is invoked by the advent of a red mite, hurrying over the white field, a perfect crimson streak. If a man were to run at that rate, according to bulk, he would get over the ground about a thousand miles an hour, and race entirely around the world in a day and night, with three hours for refreshment and repose.

Arresting the atomic runaway, and clapping him under my *semper paratus* Craig Microscope, in an instant I had under my eye a wonder—a bright crimson bird, wingless, like the penguin, but perfect in proportions, and of most exquisite beauty; its downy plumage brilliantly bright; its six perfect bird legs, three set on either side. I saw there the secret of the rapid race. Fancy a turkey gobbler with six legs, each one putting in its quota of speed! Would'nt the old fellow outrun a hurricane? Then there are the five white, delicate toes, more like a lady's fingers, to each foot; black, lustrous eyes; and beak like that of the great "war eagle"—all harmonious; but strange—very wonderful—mysterious—the manner in which that single bit of clear glass metamorphoses the tiny red mite into a magnificent bird! There, go out with you, and go your way, diminished to a red atom, almost infinitesimal again! Seud—scatter, crimson speck, and leave me to my say of my magnifying miracle.

For the farmer and fruit-grower, especially, these simple, practical instruments are invaluable; and to their children, a source of education, amusement and real instructive pleasure, of which they will never grow weary. A bright little girl of ten years, daughter of a farmer friend, to whom I loaned mine, actually acquired a fuller and more correct knowledge of half a hundred insect inhabitants of her neighborhood, in six weeks' practice with the microscope, than a professed etymologist, principal of a neighboring seminary, had acquired in thirty years of study.—*Selected.*

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GEORGE Q. CANNON. : EDITOR.

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EDITORIAL THOUGHTS.

CHILDREN who live in great cities in the East and West and in Europe see many things which the children of this Territory know nothing about. The children born here never saw railroads, cars, locomotives, steamboats, nor ships. There are many other wonderful things which they never saw. In old countries, where the people have lived for hundreds of years, they have made many improvements, which our country is too newly settled to have at present. But before long we will have many of these great advantages. We cannot have ships, because we have no large bodies of water upon which they could sail; but we can have little steamboats to sail on our lakes, and on land we can have railroads on which to ride and carry our freight. Every thing that is good and beneficial among the nations we can bring here and enjoy.

But there are many other things which the children who live here do not see, and it is a blessing to them that they are not forced to look upon them. In the most of those cities there are drinking saloons upon almost every corner of the principal streets. In these saloons they sell liquor and other drinks to men, women and children. We have seen little boys and girls hardly as tall as the counter, go into those places with a pitcher or a bottle to buy beer or liquor for their parents. By this means many children become quite fond of strong drinks, for as they carry the liquor home they frequently drink a little of it.

Where there are so many drinking saloons there must be many drunkards. Children often see them reeling about the streets, or see the policemen carrying them to prison. And then they hear bad language; men, and frequently women and boys, swearing and taking the name of God in vain. Many other evils, besides these, do children brought up in large cities and other places of the earth behold. So that if they see many useful and fine things which children who live here cannot see, they also see many painful sights and hear many bad sounds that our children never see or hear.

In this Territory there are no drinking saloons except one or two that are kept for outsiders only. Drunkenness is hardly known. Indeed, we expect there are many of our little readers who never saw a man drunk. It is very uncommon also for the name of the Lord to be taken in vain. No Latter-day Saint would be guilty of such a thing. Here children see no street fights, no quarreling, no Sabbath breaking, no beggars, no vice; and it is only when strange men are in the city that they hear the name of the Lord profaned. How thankful they should be that they are born and brought up under such favorable circumstances! We can bring here all the good and useful things there are in the world; but we can leave all the evil with those who love and practice it.

THERE are some people who never grow old. Years may pass over their heads, and their bodies become bent and enfeebled by age; but yet their hearts are young and they do

not grow old in their feelings. They are as cheerful and happy as children, and seem never to have lost their youthful feelings. There is another class, who before they become full grown men and women, feel and act as though they had passed long lives of care and anxiety. If they had borne all the troubles of a nation, they could not draw deeper sighs, or have faces with greater marks of care upon them.

If you look around you, children, you will see the two classes. Some people are continually fretting and borrowing trouble. They meet trouble more than half way, and their greatest sufferings arise from difficulties which they imagine are coming upon them; but which never occur. Of course they are cross, unhappy and sour, and their faces become wrinkled and old, and their manners are not pleasant. But the other class meet troubles cheerfully and bravely; in fact, they never have any trials. All is peace with them, and everybody loves them, because they are happy themselves and they make everybody else pleasant and happy.

Children, to which class do you belong? Are you peevish and cross and always in trouble and with a frown on your face? or are you cheerful and pleasant, with a smile on your countenance? You have it in your power to give expression to your own faces. You can have youthful feelings and young heart when you are in years, or you can be old, sour and disagreeable.

WE have on hand and are constantly in receipt of Sunday School Rewards and Tickets in great variety and at very low prices. We have taken pains in selecting such as will be suitable for the children and schools of this Territory. We know that we can satisfy all as to price and we shall be pleased to fill the orders of Superintendents, Teachers and others for anything of this kind. We can also select and order Libraries for schools.

Those who have saved their files of the Second Volume of the JUVENILE INSTRUCTOR can have them bound for one dollar in a handsome embossed cloth cover, which we have had made expressly for the purpose. We shall also have similar covers for those who wish to have the Third Volume bound when it shall be completed. To schools sending a number of volumes to be bound, we will make a reduction.

We have a number of First and Second Volumes, bound, which we wish to dispose of.

DEATH OF THE APOSTLES.—The following is the manner in which death overtook the Apostles: Matthew is supposed to have suffered martyrdom, or was slain in the city of Ethiopia. Mark was dragged through the streets of Alexandria, in Egypt, till he expired. Luke was hanged to an olive tree in Greece. John was put into a boiling cauldron at Rome, but he escaped death. James, the great, was beheaded at Jerusalem. James, the less, was thrown from a pinnacle and beaten to death. Philip was beheaded. Bartholomew was skinned alive. Andrew was crucified and pounded while dying. Thomas was run through with a lance. Jude was shot with arrows. Simon was crucified. Matthias was stoned. Barnabas was stoned to death. Paul was beheaded by the tyrant Nero, at Rome.

Snow me a boy who obeys his parents, who has respect for age, always has a friendly disposition, and who applies himself diligently to get wisdom, and to do good toward others, and if he is not respected and beloved, then there is no such thing as truth in the world. Remember this, boys, and you will be respected by others, and will grow up useful men.

Man and his Varieties,

THE NEGRO RACE.

AMONGST the many causes that have contributed to change the appearance of the human family and make mankind appear to be of different races, we must consider the blessing or curse of God the greatest of all. Then add to this, difference of climate, variety of food, entirely opposite modes of life, either civilized or savage, stationary or wandering, combined with the results of the varied religions existing among men, and we shall be able to understand why there is so great a diversity in the human family.



We will first inquire into the results of the approbation or displeasure of God upon a people, starting with the belief that a black skin is a mark of the curse of Heaven placed upon some portions of mankind. Some, however, will argue that a black skin is not a curse, nor a white skin a blessing. In fact, some have been so foolish as to believe and say that a black skin is a blessing, and that the negro is the finest type of a perfect man that exists on the earth; but to us such teachings are foolishness. We understand that when God made man in his own image and pronounced him very good, that he made him white. We have no record of any of God's favored servants being of a black race. All His prophets and apostles belonged to the most handsome race on the face of the earth—Israel, who still, as represented in the scattered tribe of Judah, bear the impress of their former beauty. In this race was born His Son Jesus, who, we are told was very lovely, and "in the express image of his Father's person," and every angel who ever brought a message of God's mercy to man was beautiful to look upon, clad in the purest white and with a countenance bright as the noonday sun.

When God cursed Cain for murdering his brother Abel, He set a mark upon him that all meeting him might know him. No mark could be so plain to his fellow-men as a black skin.

This was the mark God placed upon him, and which his children bore. After the flood this curse fell upon the seed of Ham, through the sin of their father, and his descendants bear it to this day. The Bible tells us but little of the races that sprung from Ham, but from that little, and from the traditions of various tribes, we are led to believe that from him came the Canaanites, the Philistines, the Egyptians and most of the earliest inhabitants of Africa.

We are told in the Book of Abraham in the *Pearl of Great Price*, that Egypt was discovered by a woman, who was a daughter of Ham, the son of Noah. This was probably the first portion of Africa inhabited by men after the flood, it being the nearest to the land (Asia Minor) where the ark rested and the children of Noah first settled. From Egypt the families of men gradually spread out to the southward, up the river Nile and along the borders of the Red Sea, and westward by the shores of the Mediterranean.

The pure Negro, as represented by the people of Guinea and its neighboring countries, is generally regarded as the unmixed descendant of Ham. Our engraving of a Negro is of this type. Their skin is quite black, their hair woolly and black, their intelligence stunted, and they appear never to have arisen from the most savage state of barbarism. But it must not be supposed that all the inhabitants of Africa are of this unmixed black class, for it is not so; some of the mountain tribes of that continent approach to nearly white. Hence, we sometimes hear travelers speak of white Kafirs, white Arabs, &c. There are also quite a number of African tribes who vary in color from olive to dark brown and reddish black. They are also as varied in their size, height and build as they are in color. We will tell you some little of two of these African races known as the Abyssinians and Kafirs.

Abyssinia lies on the east coast of Africa, immediately south of Nubia, and near the mouth of the Red Sea, opposite the southern portion of Arabia. The people who inhabit this country are of various races, from tribes nearly resembling Negroes, to others who are very much like Bedouin Arabs. Some of these latter people claim to be descended from the Hebrews. We do not put much trust in this story, though King Solomon doubtless traded with them, as he established a port to carry on commerce with Africa at the northern extremity of the Red Sea. It is certainly possible that some of the Jewish traders settled in Abyssinia, and forgetful of the law of Moses, married some of the dark-skinned daughters of the land, who have the reputation of being very beautiful and finely made. In later days, after the captivity in Babylon, some of the returned Israelites may have wandered into Africa, as it is almost certain they did soon after the destruction of Jerusalem by the Romans and the scattering of the Jews. It is however, much more probable that the greater portion of those people are the offspring of a mixed race of Arabs and of a darker people, kindred to the Negro. Traces of Arab customs, traditions, and words are prevalent all over Africa except in its extreme South-western borders. The Arabs were great wanderers and traders; Abyssinia and Nubia lie opposite their native land on the other side of the Red sea, which was by no means difficult to cross. Many of them doubtless settled on the African shore, and not being restrained by the Mosaic law of marriage, freely mixed with the people and permanently established themselves in the country. When Mohammed came, and his followers compelled adherence to their faith at the edge of the sword, Africa became the field of many of their semi-warlike, semi-religious missions. This overrunning of the country by these foreigners no doubt produced a great change in the appearance of the people, and a number of races rose up from Arab fathers and Negro mothers whose children now form a great portion of the inhabitants of the Barbary States, Nubia,

Abyssinia, the north-western coast as far south as Senigambia, and of the people inhabiting the borders of the Atlas mountains.

This is all the more probable as far as the Abyssinians are concerned, as the nearer the coast these people dwell, the nearer they approach the Arabs in type of features and general appearance, while the more inland tribes approach nearer to the Negro race.

The next people we will allude to are the Kafirs. They appear to have originally dwelt in some of the central regions of Africa near the equator, from whence they have been gradually spreading southward; as, since the discovery and settlement of southern Africa by European nations, these people have advanced considerably further southward than they were originally found by the early navigators. In this march southward they appear to have swept before them or engulfed the earlier inhabitants of the country, who are best seen, at the present time, in the abject Bushmen and Hottentots of the British Colony in the Cape of Good Hope. In the Kafir races are sometimes included the people who inhabit Zanzibar and Mozambique on the east coast of Africa, as also many inland tribes, in addition to the tribes of South Africa more especially known as Kafirs. If we include all these people in the Kafir race, we have a great diversity of appearance and color, from almost a negro blackness to a light shade of brown. The difference of climate in the vast extent of territory in which they dwell may in a great degree account for this. In strength, activity and mental capacity they are certainly ahead of the Negro, and their knowledge of certain Mohammedan and Jewish rites, as circumcision and cities of refuge, is held to be a proof that they had come in contact with these people, if they did not to any extent mix with them. At any rate it helps to prove their more northern origin than modern Kafir land, as we have no idea that the soldiers of the Arabian prophet pushed their conquests anything like as far south. The religion and superstitions of the Kafirs give evidence that their acquaintance with Mohammed's doctrines was either very slight or that they have long since departed from his teachings and returned to their former heathenism, while among many of the kindred tribes of this race, dwelling further north, Mohammedanism is the prevailing faith.

G. R.

(To be Continued.)

For the Juvenile Instructor.

Chemistry of Common Things.

FOOD.

[CONTINUED.]

WE are all more or less familiar with the process of making flour into bread. The flour used in this country is sometimes fermented with yeast; at other times saleratus or soda is used with sour milk or buttermilk. The object is to make the bread "light," that is, to fill it with air bubbles, when it has a spongy appearance. When yeast is used carbonic acid gas is generated, which causes the dough to "rise;" a certain portion of the starch is converted into sugar and then into alcohol, and, as we have seen, when treating on fermentation, gas is given off when sugar is changed into alcohol. That gas may also be generated by using the carbonates of soda or potash (saleratus.) In large cities companies are sometimes formed for making bread by other modes: carbonic acid

gas is mechanically mixed with the dough. Bread made in this way is very sweet and white, and is sold as "aerated bread." Wheat bread is called "white" or "brown," according as the bran of the flour is retained or not. Brown bread is very wholesome, and even more nutritious than white, for bran contains flesh-forming or nitrogenous matter; it also contains material which is useful in forming bone. Flour is easily separated into starch and gluten by washing. A small quantity may be put in a piece of fine rag and washed in a basin of water, the starch, after a time, will fall down to the bottom of the water; the tough, yellowish substance remaining is gluten; it resembles the fibrous structure of the muscles of animals, its chemical constituents are the same. The starch of bread is the fuel, the gluten is the nerve and muscle-forming material; there are also other principles, which, although they do not add to the heat of the body or build up the soft parts, as the muscles, etc., add to the strength of the frame work—the bony structure. It is on account of its great value in these respects that wheat bread has been named "the staff of life," and caused it to be preferred to all other kinds of bread, although habit has much to do with diet. Thus, our Saxon ancestors used barley bread; in Scotland, even now, oat cake and oatmeal porridge enter largely into the daily food of a fine, healthy race. In many parts of Europe rye bread is used. There is an objection to the use of the flour made from these grains, it will not "rise" like wheat flour when made into bread.

We have seen that milk is the type of all food; bread is the type of what is required in solid food, it contains all the elements required to build up the body, and in the proper proportions. Our bodies are continually wearing out; every motion of the limbs, the palpitation of the heart, all the natural processes, even the action of the mind, as in thought, wears out a portion of the tissues; to replace those parts, fresh supplies of material are necessary, and our food supplies them. The gluten of the bread forms the fibrin of the muscles; the albumen forms the nerves; the starch, changed into sugar, keeps up the necessary warmth; the phosphate of lime rebuilds the bones. Whatever may be the kind of food used the same elements are appropriated by the chemical processes which go on in the body to preserve life, by repairing the waste which the living functions cause both to the nervous and muscular systems.

Habit and climate have much to do with our diet; for example, in cold weather we use more heat-giving matter, we relish fat more than in summer; our appetites are better. The Esquimaux eat large quantities of fatty matter, and the inhabitants of cold countries eat more animal food than those of warmer regions. The temperature of the body is 98°, and it is the burning of the carbonaceous part of our food which keeps up that temperature. Our clothing keeps in the heat thus formed; keep the body warm and less food is needed. This is why it is so strongly recommended to keep our cows under cover in cold weather; they require less food. Instead of the carbon being expended unnecessarily, it is taken care of—it is economized. This is true of all animals; the fat of their bodies is consumed, and the carbon and hydrogen are oxidized or burnt in the body "to keep the lamp of life burning."

Food, then, is warmth-sustaining, or heat-giving, and nourishing. A pound of flour contains nine and a half ounces of starch, which is changed into sugar by the juices of the mouth; (saliva) and two and a fourth ounces of fibrin and albumen, which are formed into muscles and nerves; then there is half an ounce of mineral matter, as phosphates, etc., and a little over two ounces of water. We see how large is the proportion of heat-giving element, but it is found that the proportion of five to one is a correct estimate of the quantities used in our daily food; that is, five times as much of fuel as of other food.

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We have seen, then, the uses of food: the water is to replace that lost from the blood, air is to supply oxygen to oxydize the blood and to impart vitality to it, the fat and sugar of our food are to impart heat, the nitrogenous food to build up the waste of the tissues of the body, and the mineral matter to make bone and to assist in the formation of the tissues. Food is various so as to please the taste and to enable man to dwell in various parts of the earth. Some people, as in China and parts of the Eastern continent, live principally upon rice, which is a very light kind of food, its proportion of flesh-forming element being very small; while in arctic regions travelers tell us that "large quantities of the coarsest fat, even the blubber of whales is acceptable." But, whatever the kind of food used, it is for one or other of the requirements of the body that it is taken. Rice, sago, potatoes, sugar, fat and vegetables which contain fat or sugar, as carrots, parsnips, beets, etc., are heat givers; oat-meal, barley-meal, pea-meal, corn-meal, cheese, peas and beans are flesh formers; the first are starch kind or "amylaceous," sugar kind or "saccharine," and oil kind or "oleaginous;" the second are "fibrinous" or flesh-forming and "caseinous" or cheese kind. We cannot live upon cheese alone, or upon peas or beans, although they are rich in flesh-forming matter. Neither can we live upon fat or sugar alone, though rich in heat-giving material; potatoes, rice and grains of various kinds fail to support life and maintain vigor of body unless used with other or nitrogenous food, as milk, meat, etc. In these things we are guided much by a kind of instinct: we desire other kinds of food; butter or molasses with bread enables us to eat with greater relish, and thus more bread is eaten and more strength results.

There are many other ways of preparing flour; cakes and biscuits are used as bread; flour is made into a paste and baked to make "hard bread," which is used on long voyages; it is also made into puddings, and in a great variety of ways; but the main object is to obtain the starch, gluten and mineral elements which are assimilated to the blood, and will be better understood when the subject of digestion is entered upon.

BETH.

(To be Continued.)

THE STORY OF AMERICAN HISTORY.

Selected from Jacob Abbott's Writings.

• [CONTINUED.]

THE settlers of New England had difficulties from time to time with the Indians, and in the earlier years of the several settlements the colonists suffered a great deal from exposure and cold, and sometimes from pestilence and famine. The settlements still, however, increased and multiplied, and in the course of one hundred years the original Indian population was almost entirely displaced, and the whole country all along the seaboard, and for hundreds of miles into the interior, was occupied almost entirely with the farms and villages of white men.

The settlements in America remained under the government and control of England from the time when they were first formed to that in which they established an independent government of their own—about one hundred and fifty years. This is called the colonial period of American history.

There were several different kinds of colonial government, but in all cases the power was exercised in England. Some of the settlements were considered as belonging to the king, others to companies of merchants, and others to individual proprietors. Whoever it was that owned the colonies, he or they, and not

the people, appointed the governor and regulated the making of the laws. At first, indeed, the people of New England were somewhat independent, and chose their own governors; but as soon as they began to be populous and powerful, the English government contrived to get the power into their own hands, and governors for these colonies were appointed and sent out from Great Britain, as well as for all the rest.

These governors and the people of the colonies did not agree very well together. The governors were usually men who entertained high ideas of their own powers and importance, and as they only came to America with a view of making a fortune and then going home again, they felt no real sympathy or community of interest with the permanent residents. They were constantly endeavoring to increase their own power and importance. They lived in handsome houses, built expressly for them by the government. They maintained a great deal of state, as if they were kings on a small scale.

The house in Boston which was built and occupied by the governors of Massachusetts in colony times yet remains, and is still known as the Province House. It was originally quite out of town, but it is now entirely surrounded and hemmed in by other buildings. There is a row of brick stores between it and the street, so the visitor is obliged to go in through an archway to see it.

In the contests that arose between the governors and the people of the colonies, the governors were by no means left alone. Great numbers of persons adhered to their cause. Some did this from hope of receiving offices; others because they probably thought it was better for the colonies that they should be under a strong control from the government in England. Then, besides the parties in America that adhered to them, they had soldiers under their command. Some of these soldiers were stationed in forts at the mouths of rivers or harbors, and others lived in barracks in the towns; but they were all under the command of the governors of the several provinces, and it was partly by means of them that the people of the colonies were held in subjection.

In process of time, a war broke out between France and England, and as Canada had been settled by the French, and was now a French colony, the English government concluded to organize an army in their colonies in America to attack it. This was accordingly done. Armies were raised, the several colonies contributing their portions of troops, and the English generals, taking command of them, led them against the French possessions. In these campaigns the troops were obliged to make long and dreary marches in storms and rain, and through the most wild and unfrequented regions, in which they encountered almost every conceivable hardship and difficulty. The chief command in these expeditions was always conferred upon officers sent out from England, while the colonists were only allowed to fill very subordinate places. The English officers were, of course, not acquainted with the country, or with the peculiar difficulties and dangers of marching through forests filled with Indians; and as they were generally too proud to take advice from those who were beneath them in rank, they often met with very serious disasters. The French contrived to engage the Indians, in many cases, to fight on their side; and the Indians, being very skillful in stratagems of all kinds; would lay in ambush till some detachment of the army came along, and would break out on them so suddenly as to put them all to flight. The soldiers would retreat from the ground as they best could, while the wagoners would cut the traces of their harness, and then mount the horses and ride away, abandoning every thing to the enemy.

But, notwithstanding these occasional disasters, the English persevered. They fitted out three grand expeditions to march through the woods into Canada, and in the end succeeded in

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conquering the country. Ever since that time, all the old French colonies that lie to the north of the United States have been subject to British power.

One might, perhaps, have supposed that being engaged together in such a war as this, and bringing it to a successful end by their joint and common exertions, would have tended to promote an excellent understanding between the English government and the people of the colonies; but, instead of this, quite the contrary effect was really produced. The government at home, finding how great and powerful the colonies were becoming, were more desirous than ever to have them completely in subjection to their own power. The people in America, on the other hand, for precisely the same reason, wished to become more and more independent. They had in each colony a Legislature chosen by the people. These various Legislatures were accustomed to meet in the principal towns, and enact laws for the internal management of the colonies, and for raising money by taxes to pay the necessary public expenses. The members, being chosen by the people, of course acted for them and in their behalf. The governors and the councils, on the other hand, being appointed by the King of England or by his ministry at home, represented the English government and acted for them. The Legislatures were all the time endeavoring to increase and strengthen their own power, which was the power of the people. The governors, in the same way, maneuvered incessantly to increase *their* power, which was that of the king and his government at home. This antagonism was continually breaking out into the most serious disputes.

The colonies at one time proposed to form a confederation, by the Legislatures, with a view of banding the people of the whole country together. This the governors opposed. They thought any union of that kind would greatly increase the strength of the people, and proportionably, weaken their own. They proposed instead that there should be a combination formed by the *governors*, and that the people themselves should remain distinct. This the people would not consent to, and the question gave rise to new difficulties and disputes, and the result was that no extended or general union of the colonies was effected in either form.

There was one object, however, which they combined to accomplish, and that was the establishment of a post-office system for the whole country. The celebrated Benjamin Franklin was one of the first post-masters general. At one time he made an extended tour through nearly all the colonies to mature and perfect the system. He traveled in a chaise, which he drove himself. His daughter Sally accompanied him. He had a spare horse with him. His daughter rode sometimes upon the horse, and sometimes in the chaise by the side of her father. Traveling in this way, Franklin was five months in making this tour. Such a tour would be accomplished now, by rail-roads and steam-boats, in five days.

As the colonies increased, the disputes between the people and the home government in regard to the question how far they were to be allowed to govern themselves, and how far they must submit to be governed by the English ministry and the Long Parliament, grew more and more serious. The English government had had the power from the beginning of making all laws in respect to commerce, and they were accustomed to tax the colonies indirectly by requiring them to pay duties on the merchandise imported from England. In order to compel them to buy this merchandise, they made laws forbidding them to establish any manufactories in America. The Americans complained of this, but still they submitted. They could not resist the payment of duties very well, for the governors had command of the soldiers in the forts by the harbors, and they would not allow the ships to come in unless the merchant to whom the goods belonged would first pay the duty. Then he

would add the duty to the price of the goods, and his customers were obliged to pay altogether.

For the Juvenile Instructor.

Original Poetry.

FOR THE 20TH WARD SABBATH SCHOOL.
Tune, "Sherman's March through Georgia."

Come all my young companions who love the Sabbath School,
We'll raise our hearts and voices, and let our joy be full;
For here we are instructed in everything that's good,
That we may learn to be useful.

CHORUS:

Hurrah! hurrah! come let us all rejoice,
Hurrah! hurrah! we've made the truth our choice;
Then, let us always love it, and never turn aside
From this time forward, forever.

We here enjoy the blessing our parents never knew,
For they were school'd in error, and we are taught what's true;
No foolish old traditions do here becloud our minds,
And we are free from delusion!

Then, let's sustain the Priesthood with all our might and main
And help bear off the Kingdom till Jesus comes again,
O! may we grow in wisdom as we increase in years
That we may meet Him rejoicing.

WM. WILLES.

For the Juvenile Instructor.

CHARADE.

BY J. W. DUNN.

I am composed of 10 letters.
My 1, 3, 5, 7, 8, 9, 10, is an eminent man in Utah.
My 7, 2, 6, 7, 8, 4, 10, is worn by ladies.
My 4, 1, 3, 9, 8, 5, 10, is an ancient patriarch.
My whole is a manufacturing town in England.

THE answer to the Charade in No. 18 is PATAGONIA.
Rolla G. Taysum, David E. Dunbar, Luella Wood, Heber Brower and James R. McGaw sent us the correct answer.

WE often omit the good we might do in consequence of thinking about that which it is out of our power to do.

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